



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0074/S, REVISION 5**

400 Seventh Street, S.W.
Washington, D.C. 20590

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive materials.

1. Source Identification - 3M Model 4F6P.
2. Source Description - The source is a welded stainless steel double encapsulation. The diameter of the outer capsule is 12.7mm (0.5") and the diameter of inner capsule is 3.17mm (0.125"). The overall length ranges from 63.5mm (2.500") to 1867mm (73.5"). The active length of the inner capsule (radioactive content) is 38.1mm (1.5") less than the overall length. Source is manufactured in accordance with 3M drawing 12-1921-0855-8 (attached).
3. Radioactive Contents - This source consists of not more than 0.37 TBq (10 Ci) of Cesium-137 in the form of 3M Brand Radiating Ceramic Microspheres. The activity per unit length in the inner capsule is uniform and ranges from small values up to approximately 1.17 GBq/mm (0.8 Ci/inch).
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 209 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires August 31, 2002.

1 "Safety Series No. 6, Regulations for the Safe Transport of Radioactive Materials, 1985 Edition, as amended 1990", published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

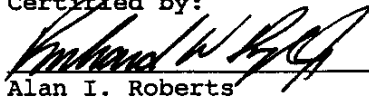
2 Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

(- 2 -)

CERTIFICATE USA/0074/S, REVISION 5

This certificate is issued in accordance with paragraph 703 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the petition and information dated May 6, 1997 submitted by TN Technologies, Round Rock, TX, and in consideration of other information on file in this Office.

Certified by:



Alan I. Roberts

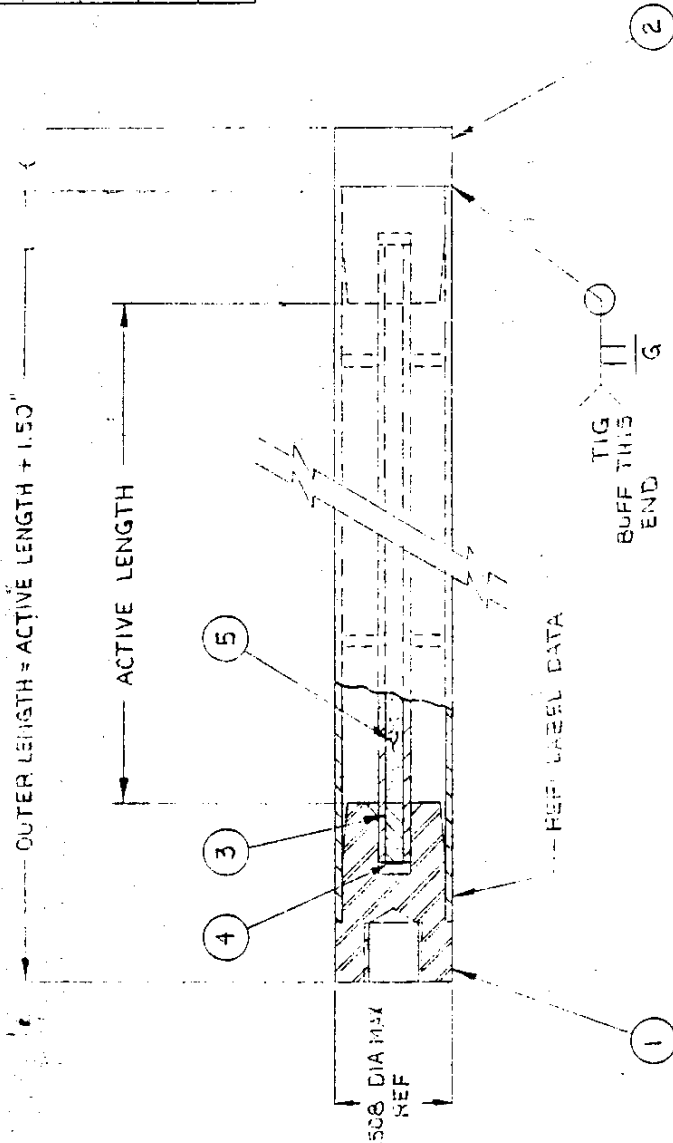
Associate Administrator for Hazardous Materials Safety

SEP - 8 1997

(DATE)

Revision 5 - Issued to update to 1985 IAEA regulations and to extend expiration date.

ITEM	QTY	PART NO.	DESCRIPTION
1	1	B-12-1921-3559-3	ASSY OUTER TUBE
2	1	B-12-1921-3558-5	ASSY INNER TUBE
3	1	B-12-1921-3538-7	INNER PLUG
4	AR	26-1004-4253-7	BRAZE: SILVER CAD FREE ALL STATE 155
5	AR		ACTIVITY: 2M BRAND RADIATING MICROSPHERES CONTAINING Cs-137



E NOV 9, 82		CRZ QD
ECO 82-0080		REV
DRAWN FROM REV D		CHG
ISSUE DATE AND CHANGE RECORD		
TITLE		
ASSEMBLY STRIP SOURCE 4FGP		
PART NO. 12-1921-0355-8		

3M COPYRIGHT 1982		This document is the copyrighted property of the 3M Company and may not be reproduced without 3M written permission or used for other than 3M authorized purposes.	
TOLERANCE AND SURFACE ROUGHNESS UNLESS NOTED		3M	
OPERATION	PLACES IN DIMENSION	MAXIMUM SURFACE ROUGHNESS	
MACHINING	± .000	± .000	✓
CUT OFF (SAW, SPLIT, SPLIT)	± .001	± .001	
WELDING	± .001	± .001	
ANGULAR DIM.	±	±	
SCALE	2X	CH. CHUCK ZENDER	
		CH. DRAKS	
		APP.	